

Geospatial Data Act Report to Congress

Phase 1 Report



December 2020

The Geospatial Data Act of 2018 (GDA) (43 U.S.C. § Ch. 46) establishes the Federal Geographic Data Committee (FGDC) as “...the lead entity in the executive branch for the development, implementation, and review of policies, practices, and standards related to geospatial data.” The GDA requires FGDC to provide a biennial report to Congress on the implementation of the statute. This report serves as Phase 1 of the FGDC’s first report to Congress.

The FGDC member agencies, listed below, approved this report on December 11, 2020.

Department of Interior: FGDC Chair

Office of Management and Budget: FGDC Vice Chair

Department of Agriculture

Department of Commerce

Department of Education

Department of Energy

Department of Health and Human Services

Department of Homeland Security

Department of Housing and Urban
Development

Department of Justice

Department of Labor

Department of State

Department of Transportation

Department of Treasury

Department of Veterans Affairs

General Services Administration

National Aeronautics and Space
Administration

Table of Contents

Table of Contents	3
INTRODUCTION AND PURPOSE	4
1. EXECUTIVE SUMMARY	5
2. BACKGROUND	6
2.1. Statutory Requirements.....	6
2.2. GDA Reporting Requirements.....	7
3. GEOSPATIAL DATA ACT IMPLEMENTATION ACTIVITIES	9
3.1. Tiger Team, Evaluations, and the Geospatial Data Act Roadmap.....	10
3.2. Partner Engagement	10
3.3. OMB Circular A–16 Revisions.....	10
3.4. National Spatial Data Infrastructure Strategic Planning.....	10
3.5. National Geospatial Data Assets	11
3.6. GeoPlatform.....	14
3.7. Standards Inventory	14
3.8. Aligning with the Federal Data Strategy and the Evidence Act/OPEN Government Data Act.....	15
3.9. Inspectors General Audits.....	15
4. NATIONAL GEOSPATIAL ADVISORY COMMITTEE	16
4.1. NGAC Inputs on GDA Implementation.....	16
4.2. Use Cases for Geospatial Information.....	17
5. PHASE 1 Report: CHALLENGES AND RECOMMENDATIONS	19
GLOSSARY OF ACRONYMS	20
REFERENCES CITED	20

Figures

Figure 1. Overview of the FGDC and Agency Geospatial Data Act Reporting Responsibilities. .	8
Figure 2. Overview of the NGDA Elevation Theme, 3D Elevation Program	12
Figure 3. Overview of the NGDA Address Theme, National Address Database.....	13
Figure 4. Screen shot of the GeoPlatform website at https://www.geoplatform.gov/	14

INTRODUCTION AND PURPOSE

Recognizing the vital role of geospatial data (location data) in enabling Federal agency missions, Congress passed the Geospatial Data Act of 2018 (GDA). The intent of the GDA is to improve collaboration across agencies, to increase efficiency in delivering agency missions, and to enhance oversight of the Federal government's investments in geospatial data. The GDA identifies the Federal Geographic Data Committee (FGDC), under the direction and leadership from the U.S. Department of the Interior, as the lead interagency body in implementing the GDA. The GDA includes a requirement that the FGDC submit a biennial report to Congress on the status of its implementation.

The purpose of this document is to meet the goals of phase one of a two-phased approach for providing the required biennial report to Congress. This first phase report is a summary of GDA implementation. The second phase will be a more detailed report of agency accomplishments and progress on their GDA required activities and will be submitted to Congress in the third quarter of Fiscal Year 2021.

Highlights

The GDA impacts FGDC governance, coordination, operations, and policies.

The GDA mandates multiple reporting and review requirements for GDA agencies, including multiple reports per agency to support integrated FGDC annual reports and biennial Reports to Congress.

The FGDC will fulfill its requirement for reporting to Congress using a two-phased approach:

Phase 1: High-level Summary of Activities

A summary of the interagency GDA implementation activities, challenges, and recommendations to Congress.

Phase 2: FGDC Agency Summaries and Progress Report

A summary of agencies' National Geospatial Data Asset data theme development progress; achievements and progress of agencies' mission-based geospatial strategies.

1. EXECUTIVE SUMMARY

Digital spatial information is a critical component of the national infrastructure and knowledge economy, providing the means to integrate a wide variety of services that contribute to public health, national security, environmental sustainability, and national prosperity.

In the Geospatial Data Act of 2018 (GDA) Congress found that promoting greater access and use of Government information and data has sparked new, innovative start-ups and services and spurred economic growth in many sectors. Geospatial information has also advanced scientific research, promoted public services, and improved access to geospatial data for the purposes of promoting public health, weather forecasting, economic development, environmental protection, and understanding and addressing other local-to-national issues.

The GDA establishes the Federal Geographic Data Committee (FGDC) as the lead interagency body in the executive branch for the development, implementation, and review of policies, practices, and standards relating to geospatial data. This law defines Federal agencies' responsibilities for geospatial data coordination, outreach, management, reporting, and services. In addition, it calls for the implementation of the National Spatial Data Infrastructure (NSDI) which includes the technology, policies, standards and human resources necessary to promote the sharing of geospatial data.

With the passage of the GDA, both the legislative and executive branches of government recognize the value and benefit of efficient, effective, and dependable geospatial data, services and infrastructure to the Nation. This recognition is supported by a large non-Federal constituency of partners and practitioners represented by the National Geospatial Advisory Committee (NGAC), a Federal Advisory Committee established by the GDA.

Upon the enactment of the law, the FGDC, with advice and recommendations from the NGAC, evaluated the impacts of the GDA on the geospatial community. Agencies also provided information to their respective Inspector Generals for the initial set of audits specified in the GDA. FGDC interagency teams developed reporting tools for consolidated interagency reporting and evaluated governance and membership impacts. They also developed an implementation roadmap; provided content for pending Office of Management and Budget guidance; and developed the new NSDI Strategic Plan. In addition, steps were implemented to ensure coordination with other data-related statutes, including the Foundations for Evidence Policy-Making Act (Evidence Act) and the OPEN Government Data Act.

2. BACKGROUND

Geospatial data and technology are critical components of our Nation's digital infrastructure. Geospatial technology enables the integration of disparate information from many sources to support decision making across broad sectors of the economy. The growing geospatial industry acts as an enabler for other technologies, including location applications on mobile devices, unmanned aircraft systems, autonomous vehicles, geospatial intelligence, and the Internet of Things.

The Federal government, working in partnership with State and local governments, Tribes, academia, and the private sector, has the opportunity through the Geospatial Data Act (GDA) to build a truly national spatial data infrastructure to ensure our country's competitive edge, support innovation, and promote economic growth to serve the public.

Geospatial data and technology allow organizations and government at all levels to be more efficient and effective in addressing issues of national interest. For example, in managing the response to a national health emergency, e.g., Coronavirus disease 2019 (COVID-19), government leaders and public health officials have recognized the value of geospatial information systems to understand the actions needed for response and recovery efforts. State-wide COVID-19 dashboards provide informative, geo-enabled views of critical information for leaders, frontline workers, and the public. Geospatial tools are critical in monitoring conditions associated with the outbreak of COVID-19 and support predictive models to analyze trends as key information for the response. The locations of new outbreaks, high-risk populations, testing facilities, available hospital beds, medical supplies, and relief services are just some of the critical data and analysis that can be mapped for decision makers to leverage and mobilize resources.

The GDA was enacted with the intent of improving collaboration across agencies, improving efficiency, and providing oversight of the Federal government's investments in geospatial data. The GDA identifies the National Spatial Data Infrastructure (NSDI) as an enabler to ensure that geospatial data from multiple sources are available and easily integrated to enhance the understanding of the physical and cultural world. The GDA identifies the Federal Geographic Data Committee (FGDC), under the direction and leadership from the U.S. Department of the Interior, with primary responsibility for the implementation of the NSDI.

2.1. Statutory Requirements

The GDA includes a requirement for the FGDC to submit a biennial report to Congress. The GDA states that the Committee (FGDC) shall—

- “not less than once every 2 years, submit to Congress a report that includes the summaries and evaluations required under subparagraphs (A) and (B) of paragraph (10), the comments of the Advisory Committee, and the responses of the Committee to the comments” (43 U.S.C. § 2802(c)(11)(C)); and

- “not less than once every 2 years, submit to Congress a report that includes the comments of the covered¹ agencies and the responses of the Committee to the comments” (43 U.S.C. § 2802(c)(12)).

2.2. GDA Reporting Requirements

The GDA promotes improved delivery of geospatial services and enhanced accountability and transparency for national geospatial investments. To meet these goals, the GDA includes extensive reporting requirements for covered agencies, lead covered agencies, and the FGDC (Figure 1). These reports are interdependent and include requirements for close engagement with non-Federal entities, and users of geospatial data. The implementation of the GDA provides a more coordinated approach to national geospatial initiatives and the development of the NSDI². FGDC agencies are beginning to address the new GDA requirements by leveraging existing agency resources, while at the same time supporting enterprise GDA planning activities and supporting their missions.

The biennial GDA report to Congress is being delivered in two phases:

- **Phase 1: High-level GDA Report to Congress.** Phase 1 of the report to Congress includes a summary of the GDA implementation activities to date, a status on reporting requirements of the GDA, a summary of the National Geospatial Advisory Committee (NGAC) inputs, and implementation challenges and recommendations. (This report).
- **Phase 2: FGDC Agency Summaries and Progress Reports.** Phase 2 of the report to congress, this document will include:
 - A summary of the status of each [National Geospatial Data Asset](#) (NGDA) data theme and an evaluation of its progress,
 - A summary of achievements and an evaluation of the progress of each covered agency in the establishment and implementation of their agency’s strategy for advancing geospatial activities appropriate to their mission, and
 - Any comments from the covered agencies on the FGDC summary reports, NGAC comments on the FGDC summary reports, and any responses to those comments.

Delivery date: Submit to Congress by FY 2021 Quarter 3 and post online.

¹ [43 U.S.C. § 2801. Definitions](#)

² Per the GDA, the term "National Spatial Data Infrastructure" means the technology, policies, criteria, standards, and employees necessary to promote geospatial data sharing throughout the Federal Government, State, tribal, and local governments, and the private sector (including nonprofit organizations and institutions of higher education).

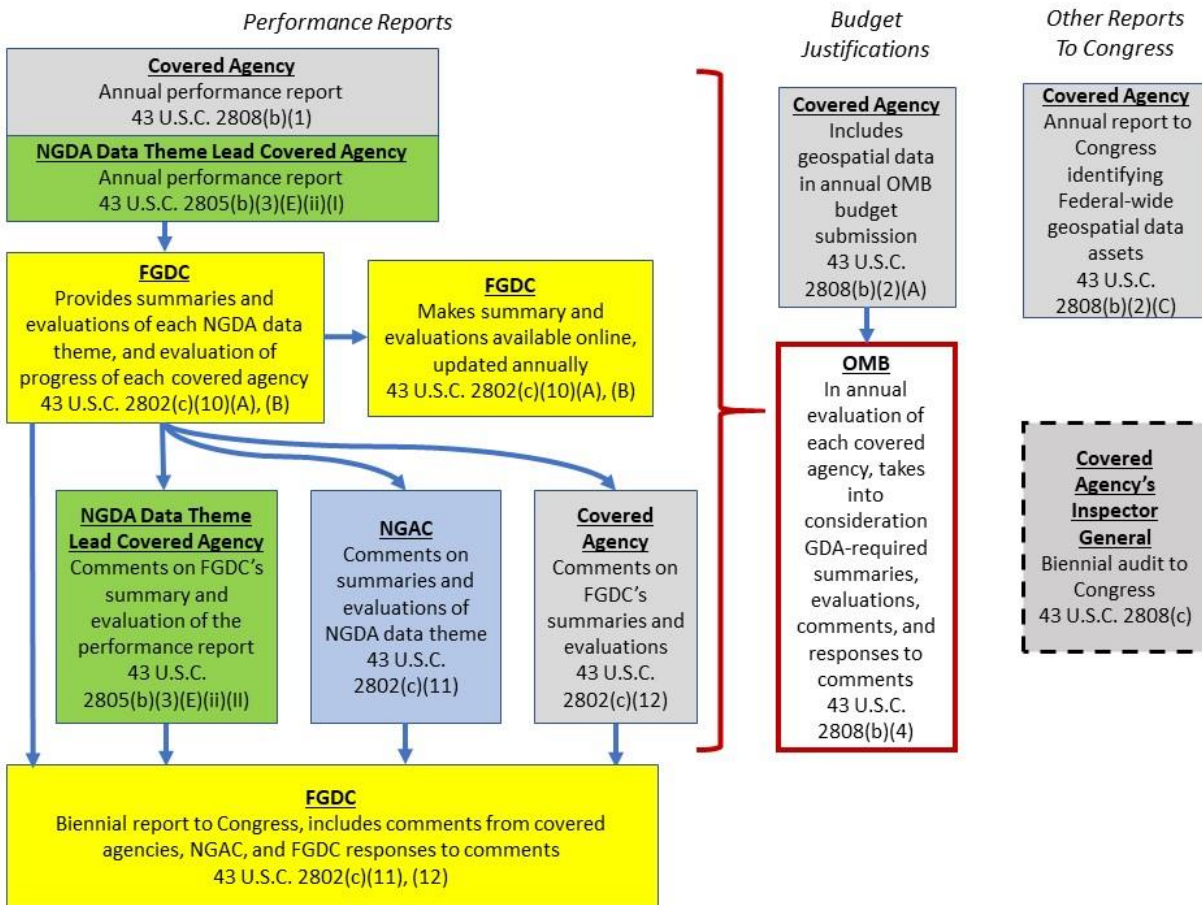


Figure 1. Overview of the FGDC and Agency Geospatial Data Act Reporting Responsibilities.

3. GEOSPATIAL DATA ACT IMPLEMENTATION ACTIVITIES

The GDA, in parallel with Office of Management and Budget (OMB) Circular A-16, “Coordination of Geographic Information and Related Spatial Data Activities (Circular A-16), revised August 2002, outlines the key elements for the NSDI. The importance of the NSDI is reflected in the fact that both the legislative and executive branches recognize its value and have mandated its development. The Congressional findings in the GDA recognize:

- The value of greater access and use of government and private sector data to the nation.
- The important role of the private sector in data and services development and acquisition.
- Resulting benefits include sparking new, innovative start-ups and services and spurring economic growth.
- Promoting public access to federally funded geospatial data and services increases its use for the purposes of promoting public health, weather forecasting, economic development, environmental protection, flood zone research and other purposes.

Both the GDA and OMB Circular A-16 contain key elements for the delivery of an NSDI that leverages interoperable data from many sources and include:

- Key national data sources – National Geospatial Data Assets – authoritative data managed as national assets
- Data standards for interoperability – which increase access and use and reduce redundant data creation, storage, and management
- Federal data services provisioning – GeoPlatform – integrated with the Federal Data Catalog and providing spatial data and services to agencies, partners and the public
- Geospatial data management – designated Federal agencies managing datasets as assets of a Federal geospatial data portfolio
- Geospatial workforce development– Geospatial and IT professionals with the skills and experience to acquire, manage, analyze, disseminate, and promote geospatial information
- Organized agency mission support – agency-wide use and requirements planning that includes user and partner needs
- A Federal coordination structure – the FGDC and its Office of the Secretariat (FGDC OS)
- Active engagement with users and constituents – the NGAC and direct agency and user engagement.

Each of these elements are essential to the delivery of a sustainable national capability. These elements and their implementation, as developed within the United States, continue to serve as a world-leading model for the successful delivery of integrated geospatial data and services. Moreover, other countries around the globe have adopted and invested in these elements to develop their own spatial data infrastructures and have successfully proven their value and utility.

3.1. Tiger Team, Evaluations, and the Geospatial Data Act Roadmap

Following the enactment of the GDA in October 2018, the FGDC established an interagency "tiger team" to assess the impacts of the new law and plan for its implementation. The tiger team and its supporting work groups identified and made recommendations on GDA elements needing further clarification. Work groups covered topics including governance and organization; data, standards, and delivery; reporting; and communication and outreach. Many recommendations were included in the subsequent FGDC submission to OMB of draft OMB guidance language. The tiger team inputs were integrated into a high-level GDA implementation roadmap and timeline.

3.2. Partner Engagement

The FGDC engaged with a wide range of partners, both within the Federal Government and with external organizations and stakeholder groups. The NGAC provided extensive input and advice on GDA implementation and approach. The FGDC has also convened a series of NSDI Leaders Forum meetings with leaders from key national geospatial organizations to gather their ideas and to discuss the implementation of the GDA and the development of the NSDI Strategic Plan.

3.3. OMB Circular A–16 Revisions

The GDA requires OMB to provide implementation guidance to the agencies. To address this requirement OMB is revising Circular A–16. In July 2019, an interagency FGDC team provided recommended text to the OMB for the update of OMB Circular A–16. The proposed recommendations focused on changes in governance, operational structures and practices, and identified areas where further clarification is required to provide for effective and efficient implementation of the law.

3.4. National Spatial Data Infrastructure Strategic Planning

The GDA assigns the FGDC, under the direction of the Department of the Interior (DOI), as the lead for the implementation of the NSDI. A sustainable NSDI ensures that geospatial data from multiple sources are available and easily integrated to enhance understanding of the physical and cultural world. In 2020, the FGDC developed a new NSDI strategic plan through engagement with a wide range of stakeholders, including Federal agencies and key geospatial organizations, and through public comment. The new NSDI strategic plan, which was approved by the FGDC and endorsed by the NGAC in November 2020, is posted at: www.fgdc.gov/nsdi-plan.

The NSDI strategic plan includes a vision, mission, and guiding principles that describe a multiyear path forward for the sustainable development of the NSDI. It includes actionable goals and objectives to achieve the NSDI vision. More importantly, the plan will encourage the use of consistent national geospatial data to promote effective governance, economic growth, and technological innovation in services for addressing important priorities and challenges.

The NSDI strategic plan also provides a model for follow-on geospatial strategies that will be developed by the FGDC agencies. These strategies, which are required by the GDA, will outline

the steps the agencies will take to support the NSDI goals and advance the use of geospatial data and technology within their organizations.

NSDI Strategic Plan (2021—2024) – Strategic Goals

- **Goal 1**—Implement the national geospatial policy and governance framework as defined by the Geospatial Data Act and related statutes and policies.
- **Goal 2**— Advance the maturity of, accelerate the acquisition of, and expand the sources of National Geospatial Data Assets to ensure that they are findable, accessible, interoperable, and reusable and meet a wide range of needs.
- **Goal 3**—Promote open standards-based interoperability to enable geospatial shared services.
- **Goal 4**—Enable and promote collaborative partnerships to meet national geospatial needs, priorities, and circumstances.

3.5. National Geospatial Data Assets

[National Geospatial Data Assets](#) (NGDAs) are the critical data components of the NSDI, and they are widely used and relied upon by users and organizations throughout the country and globally. The NGDA portfolio currently includes 18 data themes and over 170 underlying datasets. FGDC uses a portfolio management approach for managing and identifying gaps in NGDA data that follows best practices originally established under the OMB Circular A–16 “Supplemental Guidance.” These best practices include development and implementation of lifecycle maturity assessments for all NGDAs, establishment of strategic and implementation plans for the themes, and annual reporting in accordance with the GDA. To support consistent reporting across NGDA themes and datasets, FGDC is developing reporting templates and processes.

FGDC’s partners across the geospatial community recognize the vital role of the NGDAs and the importance of their successful development. The [Coalition of Geospatial Organizations](#) completed two report cards on the status and condition of key NGDAs – the NSDI Framework layers. The report cards, completed in 2015 and 2018, recognize progress by FGDC in the management of the NGDAs, but also pointed out gaps and opportunities for improvement.

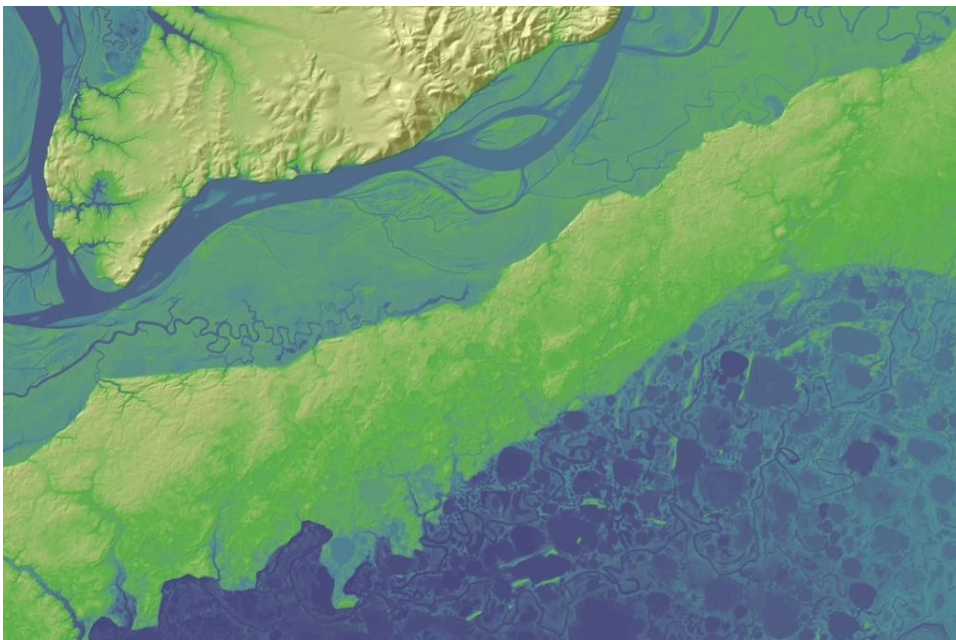
NGDA Data Theme Examples

The following NGDA Elevation and Address data theme examples – the 3D Elevation Program (Figure 2.) and the National Address Database (Figure 3.) – demonstrate the value and utility of national data themes data and provide excellent examples of how Federal agencies are working closely with partners to leverage resources. The integration of disparate data sources and formats for NGDA data themes requires significant outreach, coordination, technical processing, commitment, and sustained effort. The resulting national datasets have value across all levels of government.

Elevation Theme - 3D Elevation Program

The Elevation NGDA Data Theme is co-led by the Department of the Interior and the Department of Commerce. A key component of the Elevation Theme is the [3D Elevation Program](#) (3DEP), managed by the U.S. Geological Survey (USGS). 3DEP is a highly successful example of collaborative geospatial data development, informed by committed leadership and effective partnerships. The goal of 3DEP is to complete acquisition of nationwide lidar (Interferometric Synthetic Aperture Radar *IfSAR* in Alaska) by 2023 to provide the first-ever national baseline of consistent high-resolution elevation data – both bare earth and 3D point clouds – collected in a timeframe of less than a decade. 3DEP was designed to provide a 5 to 1 return on investments and a conservatively estimated monetary benefit of more than \$690 million per year, with the potential to generate \$13 billion per year in additional benefits if implemented in 8 years. The first full year of 3DEP production began in 2016 and at the end of FY2020, data that meet 3DEP specifications are available or in progress for nearly 77.6 of the Nation.

The 3DEP Executive Forum and Working Group have developed a set of [Federal best practices](#) to attain a higher level of coordinated implementation, maximize Federal data investments, and reduce the number of years it will take to complete national coverage. As a result, 3DEP has experienced steady growth since its inception, partnering with over 250 different Federal, State, local, academic, non-profit, and private sector partners to collect data that is made publicly available through The National Map and the GeoPlatform to benefit the Nation. 3DEP elevation data enable critical applications including flood risk mapping, infrastructure management, hazards mitigation and response, natural resources conservation, precision agriculture, critical minerals identification, and energy development, to name just a few.



Alaska IfSAR data provides 12 times more detail than previous elevation data (USGS image).

Figure 2. Overview of the NGDA Elevation Theme, 3D Elevation Program

3.6. GeoPlatform

The GDA requires the FGDC to operate the [GeoPlatform](https://www.geoplatform.gov/) (Figure 4) to support geospatial shared services, integrated use, and to address numerous local-to-national issues. The GeoPlatform provides access to geospatial data themes and metadata for use by agencies, partners, and the general public.

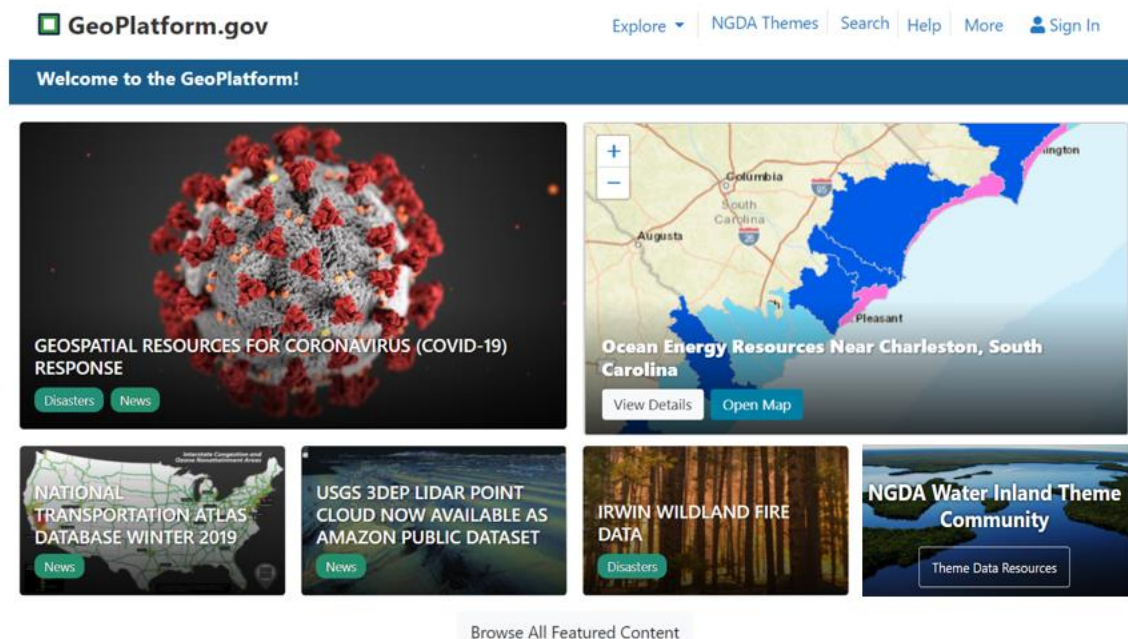


Figure 4. Screen shot of the GeoPlatform website at <https://www.geoplatform.gov/>

The FGDC has improved the capability of the GeoPlatform to meet the objectives of the GDA. The FGDC redesigned the GeoPlatform website in 2020. The GeoPlatform website was enhanced to support different machine-readable standards-based data formats to support standards and advance shared services systems and data interoperability. The FGDC has also leveraged GeoPlatform.gov community services sites to strengthen engagements within the communities of interest.

3.7. Standards Inventory

The FGDC is conducting an assessment that will result in a baseline inventory of data and metadata standards for NGDAs. This inventory provides input for covered agency GDA reporting, NGDA standards implementation planning, and fulfills an action in the *Federal Data Strategy 2020 Action Plan*. These actions facilitate a common Federal approach to managing compliance with multiple laws and requirements, including the GDA and the Foundations for Evidence-Based Policymaking Act (Evidence Act) and the OPEN Government Data Act. These results will also support the goals listed in the NSDI strategic plan.

3.8. Aligning with the Federal Data Strategy and the Evidence Act/OPEN Government Data Act

The GDA is being implemented in manner that aligns with other data-related policies and statutes, including the Federal Data Strategy and the Evidence Act/OPEN Government Data Act. The FGDC has worked with the Chief Data Officers Council and OMB to ensure coordination on these efforts. The Federal Data Strategy 2020 Action Plan includes four activities that reflect the alignment of the FGDC's implementation of the GDA with broader Federal data enterprise efforts.

3.9. Inspectors General Audits

The GDA requires Inspectors General (IGs) of covered agencies to conduct biennial audits of agency compliance with GDA requirements. The first set of audits were completed in October 2020. The FGDC OS, covered agencies' IG staff, geospatial leadership, program leads, and data managers engaged numerous times during the audit process to educate and provide information and documents to inform the IG's audit findings. It is anticipated that future biennial audits will be able to make use of annual agency strategies and reports required by the GDA, although those were not yet available for the inaugural audits.

4. NATIONAL GEOSPATIAL ADVISORY COMMITTEE

The NGAC is a Federal Advisory Committee that provides advice and recommendations to the FGDC on management of Federal and national geospatial programs, the development of the NSDI, and the implementation of the GDA. The NGAC, now authorized by the GDA, includes members from all levels of government, Tribes, the private sector, academia, and non-profit organizations. A primary requirement throughout the GDA is Federal engagement with non-Federal constituents and users. The NGAC is one of the primary means for the FGDC to collaborate with the wide network of partners within the national geospatial community.

4.1. NGAC Inputs on GDA Implementation

The NGAC has provided thoughtful and constructive advice and feedback on the implementation of the GDA. The varied perspectives of the NGAC membership have helped to shape the approach, emphases, and scope of the implementation effort. The NGAC's contributions have included:

- A white paper with initial comments on implementation of the GDA³, May 2019;
- Inputs into the development of the strategic plan for the NSDI, in particular recommendations on the mission, vision, and guiding principles for the NSDI; and,
- Recommendations for the FGDC's GDA biennial report to Congress, including a set of use cases demonstrating the wide-ranging utility and value of geospatial information and technology (see Sec. 4.2).

The NGAC also approved the following resolution in June 2020 providing recommendations on the ongoing implementation of the GDA:

NGAC RESOLUTION ([link to June 2020 resolution](#))

The National Geospatial Advisory Committee (NGAC) is encouraged by the progress the Federal Geographic Data Committee (FGDC) community is making in implementing the Geospatial Data Act of 2018 (GDA). The NGAC has provided initial comments on GDA implementation through its paper, "Initial Comments on Geospatial Data Act Implementation" (May 2019), and through ongoing inputs to the National Spatial Data Infrastructure (NSDI) strategic plan and the FGDC's GDA biennial report to Congress.

The NGAC resolves that:

1. Given the vital and growing role that integrated geospatial information and technology plays in our society, *the NGAC strongly supports the GDA and believes it to be a comprehensive approach and roadmap for advancing the NSDI.*
2. Given that the GDA planning and reporting requirements are considerable and highly complex, *the NGAC recommends streamlining of the reporting processes to ensure focused, efficient, and consistent reporting across government.*

³ <https://www.fgdc.gov/ngac/meetings/may-2019/ngac-paper-initial-comments-on-geospatial-data-act.pdf>

3. Given the NGAC's May 2019 Comments on the GDA, the NGAC believes the FGDC community does not have sufficient resources, either within the FGDC Office of Secretariat or within FGDC covered agencies, to adequately meet the implementation requirements of the GDA. This lack of resources puts successful implementation of the GDA at significant risk. *Specifically, NGAC recommends that the FGDC work with the Office of Management and Budget to ensure adequate resources are made available to the FGDC and covered agencies to:*

- a. Accomplish the coordination, planning, communication, reporting, and collaboration duties of FGDC as required by the GDA in Sections 753(c) and 755(c); (43 U.S.C. § 2802 and § 2804);
- b. Enable lead covered agencies to provide the leadership, coordination, and management required in Section 756(b) of the GDA (43 U.S.C. § 2805(b)) to advance nationwide development, maintenance, and open accessibility of the NGDA data themes for all organizations and the public, through partnerships with all appropriate stakeholders;
- c. Transform interagency service delivery collaboration to take advantage of the most efficient and effective technologies for providing access to integrated geospatial data from all appropriate NSDI stakeholders, as required in Section 758 of the GDA (43 U.S.C. § 2807);
- d. Strengthen the content, quality, data management, and service delivery for each of the NGDA data themes by responsible covered agencies, as required in Sections 756 and 759 of the GDA (43 U.S.C. § 2805 and § 2808).

*Adopted by the NGAC on June 10, 2020

4.2. Use Cases for Geospatial Information

To illustrate the importance and value of geospatial information, the NGAC developed a set of use cases demonstrating the power of geospatial data and technology to help solve a wide range of critical local, regional, and national problems. Although most of the use cases describe local or State needs that affect parts of the country, they also illustrate national issues, as well as issues that transcend national boundaries. They describe the value of location, illustrate how the use of NGDAs help address national issues, and describe how geospatial information makes a difference. The NGAC use cases⁴ include the following (titles link to full use case):

Floodplain Management: Flood management is a recurring issue in many States. The geospatial data and tools used for mapping, flood analysis, or communicating the risk to the public, businesses, or government provide the foundation for the North Carolina Flood Mapping Program. Tools such as interactive flood modeling allow local leaders to more accurately identify at-risk populations. The lessons learned from using geospatial tools integrated with other engineering and survey data can be applied by many other

⁴ <https://www.fgdc.gov/ngac/meetings/june-2020/ngac-summary-of-2020-use-cases-ngac-june-2020.pdf>

States and regions in addressing seasonal flooding issues and flooding resulting from storm events.

Social Services: Geospatial data and technology make government services, including social services, more efficient and effective. The Oregon Foster Care initiative illustrates the benefit of complete and accurate address data integrated with administrative data to streamline the provision of social services. Once issues can be identified across databases in multiple agencies, geospatial technology and analytics can dramatically improve outcomes in the child welfare system.

2020 Census: Data from the 2020 Census inform decision making in the private sector and government, and help determine how U.S. Congressional resources are apportioned, how State and Federal dollars are distributed. To accomplish this, the count needs to be accurate. The U.S. Census Bureau applied geospatial data and technology to create tools to improve the quality and completeness of the 2020 Census collection. The [Response Outreach Area Mapper \(ROAM\)](#) project is an example of the Government using geospatial technology to work efficiently and effectively to ensure better quality results from the 2020 Census.

Health Issues: Geospatial data are critical in addressing the national opioid crisis. Geospatial mapping of the crisis reveals how significant this crisis is and how the epidemic varies at the State and local levels across the country. Mapping the crisis has helped decision makers identify hot spots, coordinate responses, prioritize and deploy resources, and educate the public on its effects. The strategy used in northern Kentucky to address the opioid issue can be applied to other hot spots in the Nation.

Public Infrastructure: Public infrastructure is often taken for granted. The Pavement Management Program in use in Topeka, Kansas, is an example of a geospatial asset management process used to allocate resources effectively to maximize the service life of paved roads. Geospatial technology and analytics are integral tools for a successful asset management program. More importantly, geospatial technology can quickly create a simple narrative for a complex process that can be replicated and applied to multiple jurisdictions.

5. PHASE 1 REPORT: CHALLENGES AND RECOMMENDATIONS

The GDA provides a constructive framework for development of national geospatial data assets and processes to ensure accountability and transparency in geospatial investments. However, agencies face a number of challenges for the successful implementation of the statute. These include addressing the significant reporting and audit responsibilities included in the GDA, allocating sufficient resources to address the requirements of the statute, and the ability to continually provide high-quality geospatial information and services for the benefit of the public.

Recommendations

To address these challenges, the FGDC agencies encourage Congress to consider the following recommendations:

- Streamline and simplify the reporting and audit requirements in the GDA, while continuing to ensure accountability, transparency, and efficiency.
- Align the planning, reporting, and audit requirements in the GDA with other data-related statutes, including the Foundations for Evidence-Based Policymaking Act of 2018 ("Evidence Act"), which includes the OPEN Government Data Act.
- If Congress wants to realize its vision for an NSDI that helps address local, regional, State, and national challenges, then consideration should be given to increasing resources for national data sets and delivery of enhanced geospatial NGDA data themes.

If supported by Congress, these recommendations would reduce administrative impacts on agency operations, improve agency mission execution, and promote value-added service delivery to other agencies, partners and the public.

The FGDC looks forward to continuing to work with Congress to meet the intent of the GDA to provide an integrated, sustainable, and world leading NSDI while ensuring efficiency and transparency.

GLOSSARY OF ACRONYMS

COVID-19	Coronavirus disease 2019
EO	earth observations
FGDC	Federal Geographic Data Committee
FGDC OS	Federal Geographic Data Committee Office of the Secretariat
FY	fiscal year
GDA	Geospatial Data Act
IG	Inspector General
NGAC	National Geospatial Advisory Committee
NGDA	National Geospatial Data Asset
NSDI	National Spatial Data Infrastructure
OMB	Office of Management and Budget
PMA	President's Management Agenda
ROAM	Response Outreach Area Mapper
SAOGI	Senior Agency Official for Geospatial Information
U.S.	United States
U.S.C	United States Code

REFERENCES CITED

Federal Chief Information Officer, Office of Management and Budget, 2020, Federal Data Strategy: 200 p., accessed August 25, 2020, at <https://strategy.data.gov/assets/docs/2020-federal-data-strategy-action-plan.pdf>.

Federal Chief Information Officer, Office of Management and Budget, 2018, President's Management Agenda: 52 p., accessed August 25, 2020, at https://www.performance.gov/PMA/Presidents_Management_Agenda.pdf,

Foundations for Evidence-Based Policymaking Act of 2018, H.R. 4174, 115th Congress, 2019, <https://www.congress.gov/bill/115th-congress/house-bill/4174/titles>